Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Washington Water Supply Outlook

and

Federal — State — Private Cooperative Snow Surveys

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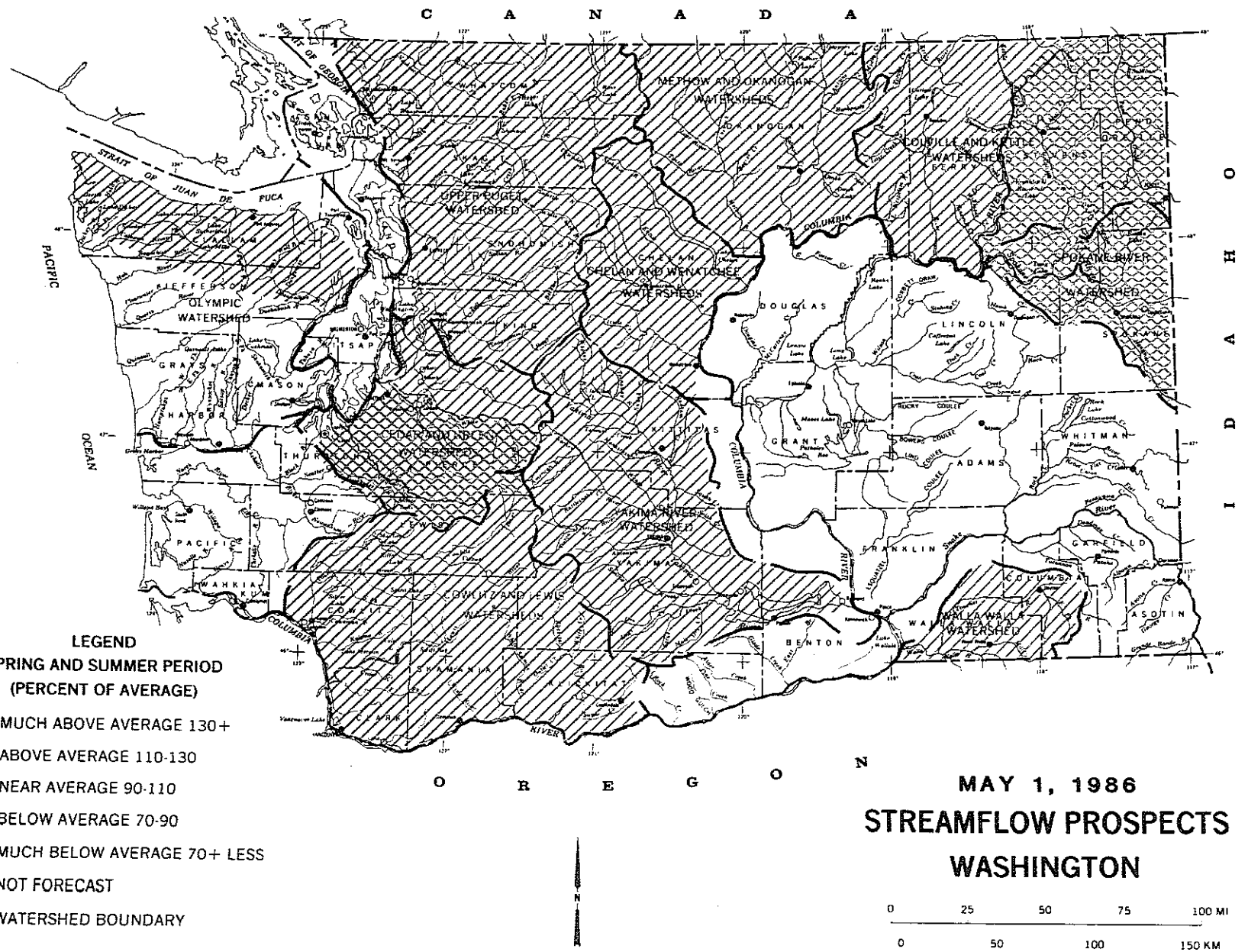
U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE



LEGEND

SPRING AND SUMMER PERIOD

(PERCENT OF AVERAGE)

- MUCH ABOVE AVERAGE 130+
- ABOVE AVERAGE 110-130
- NEAR AVERAGE 90-110
- BELOW AVERAGE 70-90
- MUCH BELOW AVERAGE 70+ LESS
- NOT FORECAST
- WATERSHED BOUNDARY

N

MAY 1, 1986

STREAMFLOW PROSPECTS

WASHINGTON

0 25 50 75 100 MI

0 50 100 150 KM

SOURCE: Data compiled by SCS Field Personnel

JANUARY 1986 4-R-39641

BASE 4-R-39260

GENERAL OUTLOOK

SUMMARY:

Spring continued to invade Washington State with its varied weather patterns during April. Streamflows varied from 51% of average on the Chehalis River to 188% of normal on the Similkameen River. Snowcover continued its decline with the Olympic Basin at 27% of average for April. Precipitation varied from 169% of normal for the Pend Oreille Basin to 49% on the Wenatchee-Chelan Basin. Reservoir storage for irrigation remained near average for the month. Streamflows are expected to be below normal for the summer.

SNOWPACK:

Snowcover varies from below average to much below average throughout Washington. Fewer snowcourses are read during the May 1st readings than in previous months. Five of the 34 SNOTEL sites are bare of snow. The Okanogan Basin shows the best average with 88%, while the Olympic Basin has the lowest at 27% of normal. Other basin averages are Yakima 62%, Wenatchee 58%, Skagit 70%, Cowlitz 57%, and the Pend Oreille 60%. Maximum snowpack occurred at the Paradise SNOTEL where 59 inches of snow water were measured.

PRECIPITATION:

April moisture was much above average for the Colville-Pend Oreille Basin at 169%. The Wenatchee Basin was the lowest at 49% of normal. Other basins with near normal precipitation for April are the Spokane at 101%, Cowlitz 100% and the Green River at 93%. Those with below average precipitation include the Yakima at 79%, Walla Walla at 88% and the Okanogan at 74%. Most of the precipitation was in the form of rain and only minor amounts of snowfall were reported from the SNOTEL sites.

RESERVOIRS:

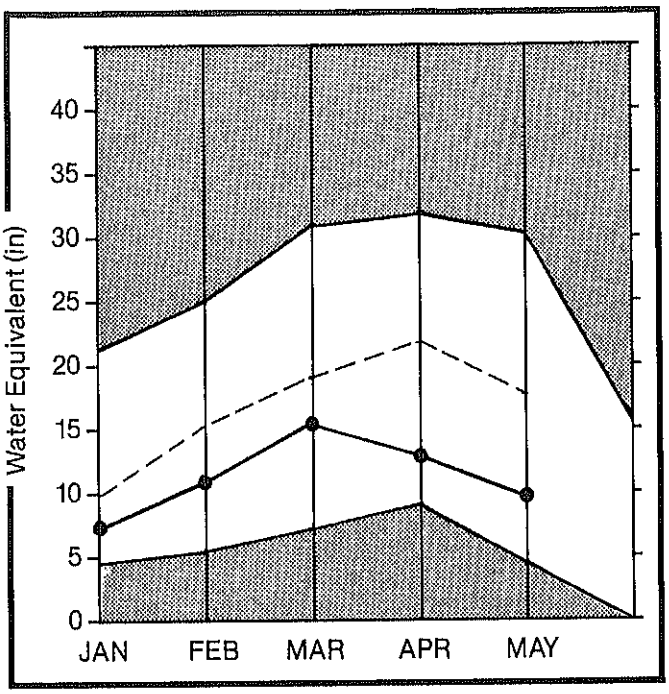
Irrigation reservoirs are at 102% of May 1 average storage. The Yakima reservoirs are storing 796,000 acre feet or 75% of capacity. The Okanogan reservoirs are storing 16,700 acre feet which is 71% of capacity. Roosevelt Lake is at 2,700,700 acre feet or 51% of capacity. Lake Chelan is at 85% of May 1 normal and 57% of capacity. Ross reservoir is at 141% of May 1 normal and 65% of capacity.

STREAMFLOW:

April streamflow varied widely over Washington with the Similkameen River continuing high at 188% of normal and the Chehalis River the low at 51% of average. Most westside streams were low with the Skagit at 87%, the Skykomish at 75% and the Cowlitz River at 68%. The Wenatchee River continued above average at 124% as did the Chelan at 124%, the Kettle River 135% and the Pend Oreille River at 119%. The Yakima River was at 89% and the Spokane River was 82% of normal for April. Streamflow is forecast to be below average to much below average over all of Washington.

SPOKANE

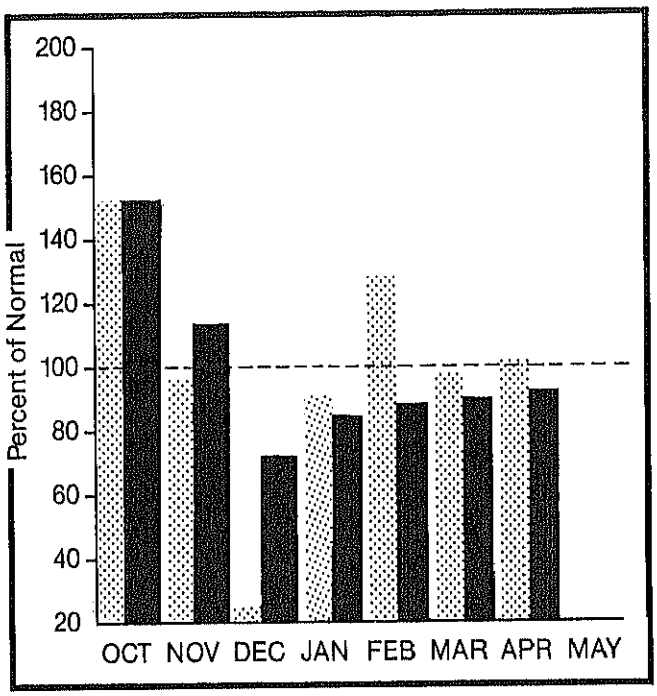
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

SPOKANE RIVER BASIN

WATER SUPPLY OUTLOOK:

Snowcover continued to decline during April, going from 58% of normal on April 1 to 56% on May 1. April precipitation was average at 101%, with most of it in the form of rain. April streamflow was 82% of normal. Forecasted streamflow is 51% of average. Storage in Coeur d' Alene Lake is 153,600 acre feet or 68% of normal for May 1.

For more information contact your local Soil Conservation Service office.

SPOKANE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SPOKANE at Post Falls	MAY-SEP	1977.0	1010.0	51	73	29				
	MAY-JUL	1884.0	956.0	50	73	29				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
COEUR D'ALENE	225.1	153.6	214.0	275.1

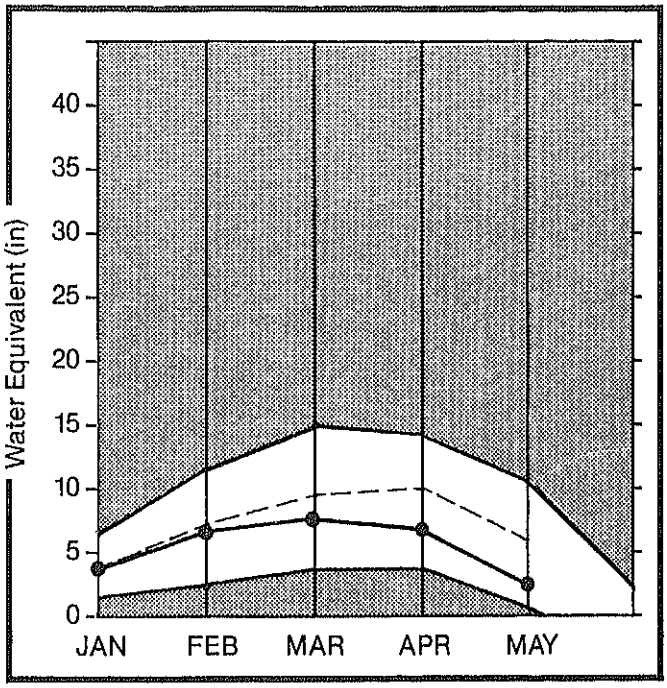
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.0	THIS YEAR AS % OF LAST YR.	AVERAGE
Spokane River	8	47	50

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

COLVILLE AND PEND OREILLE

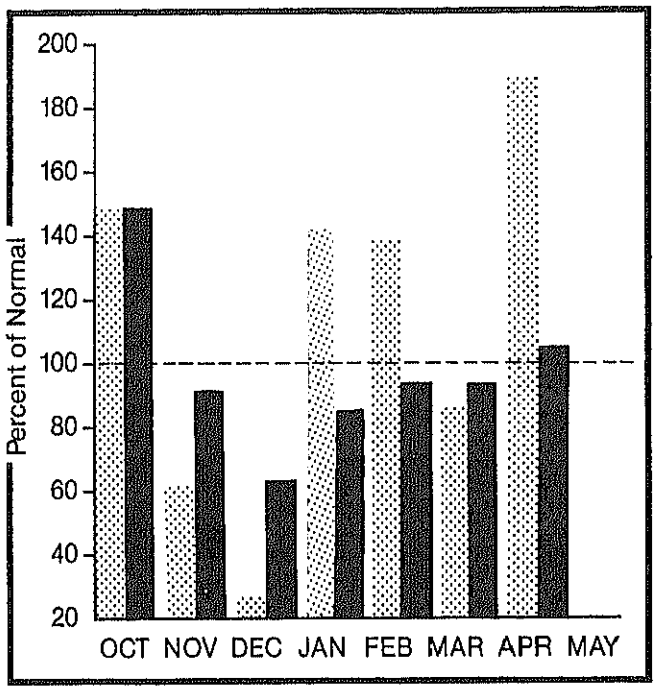
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

COLVILLE - PEND OREILLE RIVER BASINS

WATER SUPPLY OUTLOOK:

Snowmelt continued in the Colville-Pend Oreille Basin with streamflow at 119% of April normal. Streamflow on the Kettle River was also high at 135% of average. Precipitation was 169% of normal for April with 3.22 inches recorded at the Colville airport. The water year to date precipitation has been 100% of average. Snowcover was 60% of average. Forecasted streamflows are Kettle 80%, Pend Oreille 62% and 63% on the Colvile. Storage in Roosevelt is 197% of average at 2,700,700 acre feet.

For more information contact your local Soil Conservation Service office.

COLVILLE - PEND OREILLE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
PEND OREILLE RIVER bl Box Canyon	MAY-SEP	13316.0	8640.0	64	85	45				
	MAY-JUL	12047.0	7700.0	63	84	44				
	MAY-JUN	10119.0	6480.0	64	84	44				
CHAMOKANE CREEK	JUL-AUG	3.6	2.9	80	111	28				
COLVILLE RIVER at Kettle Falls	MAY-SEP	85.1	52.8	62	99	25				
	MAY-JUL	74.3	46.8	62	100	26				
	MAY-JUN	66.0	41.6	63	100	26				
KETTLE RIVER nr Laurier	MAY-SEP	1581.0	1260.0	79	98	62				
	MAY-JUL	1491.0	1180.0	79	97	61				
	MAY-JUN	1334.0	1050.0	78	97	61				
COLUMBIA RIVER at Birchbank x	MAY-SEP	41733.0	41900.0	100	113	87				
	MAY-JUL	32833.0	32900.0	100	113	87				
	MAY-JUN	23155.0	23200.0	100	113	87				
COLUMBIA RIVER at Grand Coulee x	MAY-SEP	60100.0	54800.0	91	102	80				
	MAY-JUL	49400.0	44500.0	90	101	79				
	MAY-JUN	37300.0	33600.0	90	101	79				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
ROOSEVELT	5232.0	2700.7	947.3	1310.0
BANKS	715.0	661.5	645.4	435.0

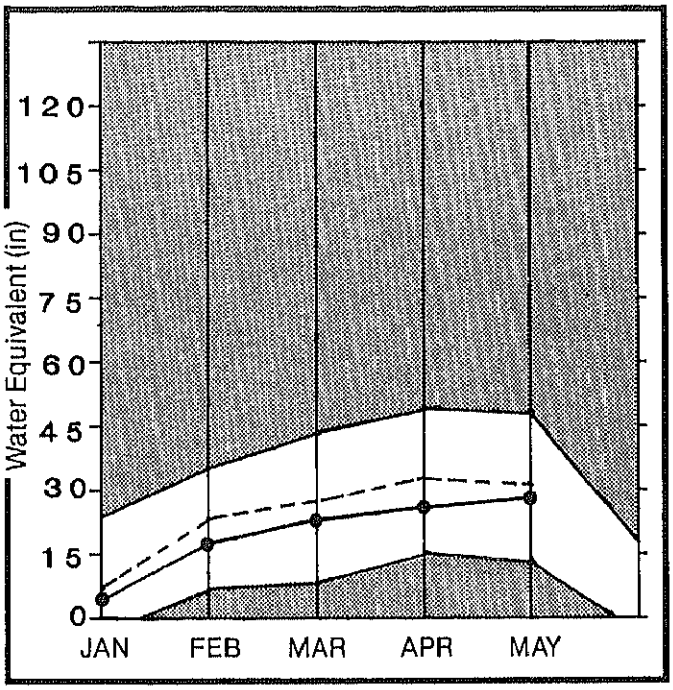
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Colville River	0	0	0
Pend Oreille River	10	64	61
Kettle River	2	83	67
Omac Lake, Twin Lakes	0	0	0
Newman Lake	0	0	0

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

OKANOGAN AND METHOW

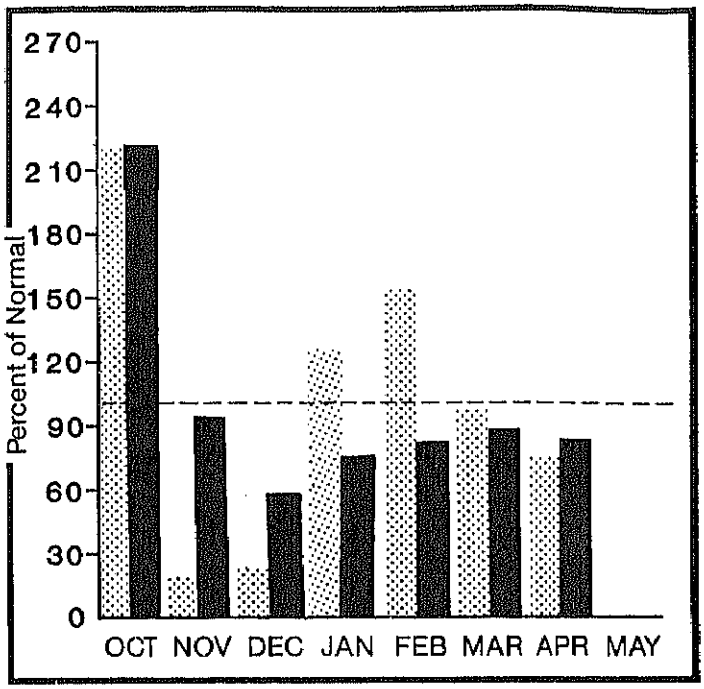
Mountain snowpack* (Inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

OKANOGAN - METHOW RIVER BASINS

WATER SUPPLY OUTLOOK:

Streamflow remained high in the Okanogan with the Similkameen River at 188% of normal and the Okanogan River at 146%. All Low elevation snow is now gone with the Salmon Meadows SNOTEL site bare. Snowcover in the upper basin is at 88% of April normal. Precipitation was 74% of average for April, for a water year total of 86%. Storage in the Conconully reservoirs is normal at 16,700 acre feet. Forecasted streamflows are Okanogan River 75%, Methow River 80% and the Similkameen River 75%.

For more information contact your local Soil Conservation Service office.

OKANOGAN - METHOW RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SIMILKAMEEN R. nr Nighthawk	MAY-SEP	1376.0	1040.0	75	104	48				
	MAY-JUL	1279.0	959.0	74	103	47				
	MAY-JUN	1075.0	806.0	74	103	47				
OKANOGAN R. nr Tonasket	MAY-SEP	1517.0	1150.0	75	105	47				
	MAY-JUL	1370.0	1030.0	75	104	46				
	MAY-JUN	1135.0	851.0	74	104	46				
METHOW RIVER nr Pateros	MAY-SEP	900.0	720.0	80	105	57				
	MAY-JUL	828.0	660.0	79	104	56				
	MAY-JUN	693.0	554.0	79	104	56				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
CONCONULLY LAKE (SALMON)	10.5	8.4	9.8	8.0
CONCONULLY RESERVOIR	13.0	8.1	13.0	8.0

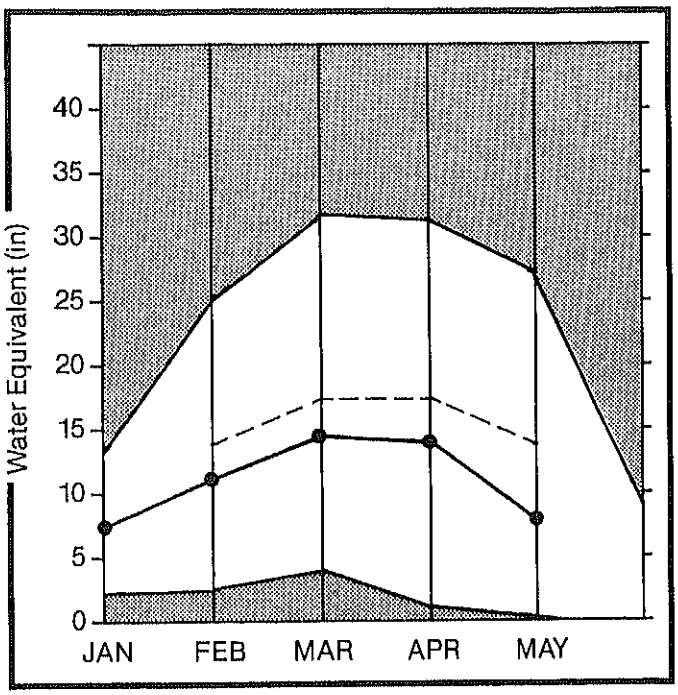
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Okanogan River	24	112	93
Methow River	4	112	79

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

WENATCHEE AND CHELAN

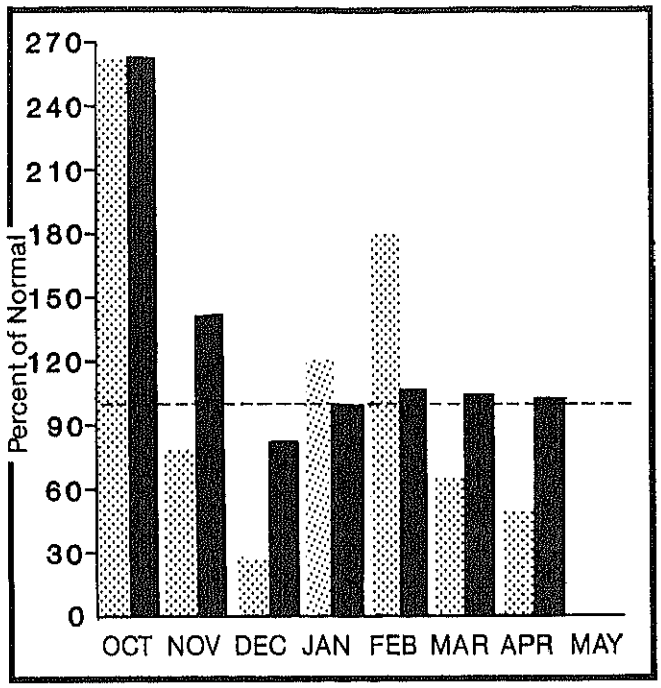
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WENATCHEE - CHELAN RIVER BASINS

WATER SUPPLY OUTLOOK:

Precipitation for April was 49% of normal bringing the water year total to 101% of normal. Storage in Chelan Lake is 382,800 acre reet or 85% of May 1 normal. Snowcover is 84% of May 1 average with Lyman Lake SNOTEL reporting 52 inches of snow water on May 1. April streamflow was 129% for the Chelan and 124% on the Wenatchee River. Forecasted streamflows are 75% on the Wenatchee, 79% on the Entiat and 79% on the Chelan River.

For more information contact your local Soil Conservation Service office.

WENATCHEE - CHELAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CHELAN RIVER at Chelan x	MAY-SEP	1094.0	864.0	78	94	64				
	MAY-JUL	946.0	747.0	78	94	64				
	MAY-JUN	717.0	570.0	79	95	64				
STEHEKIN R. at Stehekin	MAY-SEP	860.0	694.0	80	91	71				
	MAY-JUL	727.0	592.0	81	91	71				
	MAY-JUN	553.0	447.0	80	91	71				
ENTIAT RIVER nr Ardenvoir	MAY-SEP	218.0	172.0	78	94	64				
	MAY-JUL	197.0	156.0	79	94	64				
	MAY-JUN	155.8	124.0	79	94	65				
WENATCHEE RIVER at Plain	MAY-SEP	1136.0	852.0	75	108	42				
	MAY-JUL	1002.0	752.0	75	108	42				
	MAY-JUN	765.0	581.0	75	109	43				
WENATCHEE R. at Peshastin	MAY-SEP	1523.0	1160.0	76	109	43				
	MAY-JUL	1354.0	1030.0	75	109	43				
	MAY-JUN	1048.0	807.0	77	110	44				
STEMILT nr Wenatchee (miners in)	MAY-SEP	138.0	102.0	73	107	41				
ICICLE CREEK nr Leavenworth	APR-SEP	370.0	278.0	75	108	42				
	APR-JUL	340.0	260.0	76	109	44				
	APR-JUN	270.0	205.0	75	109	43				
COLUMBIA R. bl Rock Island Dam x	MAY-SEP	65550.0	59800.0	91	102	80				
	MAY-JUL	54375.0	48900.0	89	101	79				
	MAY-JUN	41160.0	37100.0	90	101	79				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
CHELAN LAKE	676.1	382.8	202.8	448.8

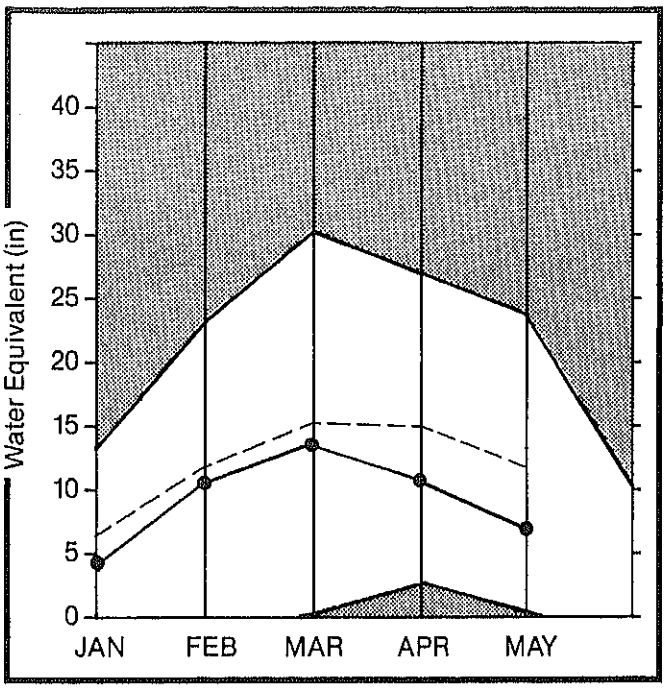
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Chelan Lake Basin	4	103	98
Entiat River	0	0	0
Wenatchee River	5	78	56
Colockum Creek	1	0	4
Squilchuck Creek	0	0	0
Stemilt Creek	0	0	0

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

YAKIMA

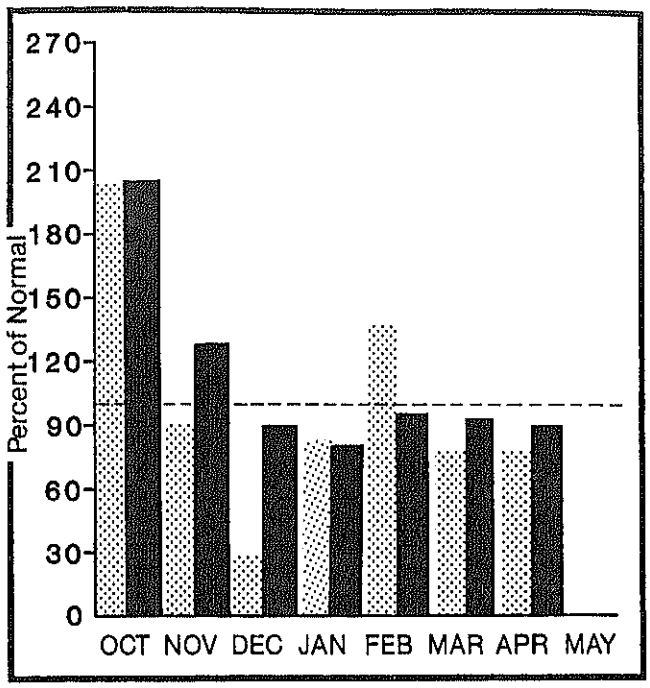
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

YAKIMA RIVER BASIN

WATER SUPPLY OUTLOOK:

Reservoir storage remains good with the Yakima reservoirs storing 796,000 acre feet or 102% of May 1 average. Streamflow was low during April with 89% of normal. Temperatures averaging 2 degrees below normal and precipitation 79% of April normal contributed to the lower flows. Snowcover continued to decline with the May 1 readings being 61% of average. Summer streamflows are forecast to be; Yakima River near Parker 75%, Naches River 75%, Ahtanum Creek 70%, and the Tieton River 73%.

For more information contact your local Soil Conservation Service office.

YAKIMA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
YAKIMA RIVER at Martin x	MAY-SEP	114.0	86.0	75	88	63				
	MAY-JUL	103.0	77.0	74	86	63				
	MAY-JUN	86.0	66.0	76	88	65				
YAKIMA RIVER at Cle Elum x	MAY-SEP	780.0	592.0	75	89	63				
	MAY-JUL	693.0	527.0	76	89	63				
	MAY-JUN	574.0	436.0	75	89	63				
YAKIMA RIVER nr Parker x	MAY-SEP	1711.0	1160.0	67	87	49				
	MAY-JUL	1510.0	1030.0	68	87	49				
	MAY-JUN	1274.0	866.0	67	87	49				
KACHESS RIVER nr Easton x	MAY-SEP	98.0	73.0	74	89	60				
	MAY-JUL	92.0	70.0	76	90	62				
	MAY-JUN	78.0	58.0	74	88	60				
CLE ELUM RIVER nr Roslyn x	MAY-SEP	400.0	280.0	70	82	58				
	MAY-JUL	360.0	252.0	70	82	58				
	MAY-JUN	291.0	203.0	69	82	58				
BUMPING RIVER nr Nile x	MAY-SEP	126.0	100.0	79	94	64				
	MAY-JUL	114.0	90.0	78	94	64				
	MAY-JUN	91.0	72.0	79	95	64				
AMERICAN RIVER nr Nile	MAY-SEP	114.0	85.0	74	87	62				
	MAY-JUL	103.0	76.0	73	85	62				
	MAY-JUN	82.0	61.0	74	87	62				
TIETON RIVER at Tieton x	MAY-SEP	214.0	158.0	73	90	58				
	MAY-JUL	175.0	129.0	73	90	58				
	MAY-JUN	133.0	98.0	73	89	58				
NACHES RIVER nr Naches x	MAY-SEP	728.0	547.0	75	89	61				
	MAY-JUL	645.0	480.0	74	88	60				
	MAY-JUN	530.0	395.0	74	88	61				
AHTANUM CREEK nr Tampico x	MAY-SEP	39.0	27.3	70	92	49				
	MAY-JUL	35.0	24.7	70	91	49				
	MAY-JUN	29.0	20.3	70	93	48				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
KEECHELUS	157.8	130.4	126.9	119.0
KACHESS	239.0	181.7	200.7	197.0
CLE ELEM	436.9	299.6	258.5	308.0
BUMPING LAKE	33.7	15.7	17.2	15.0
RIMROCK	198.0	168.6	115.3	144.0

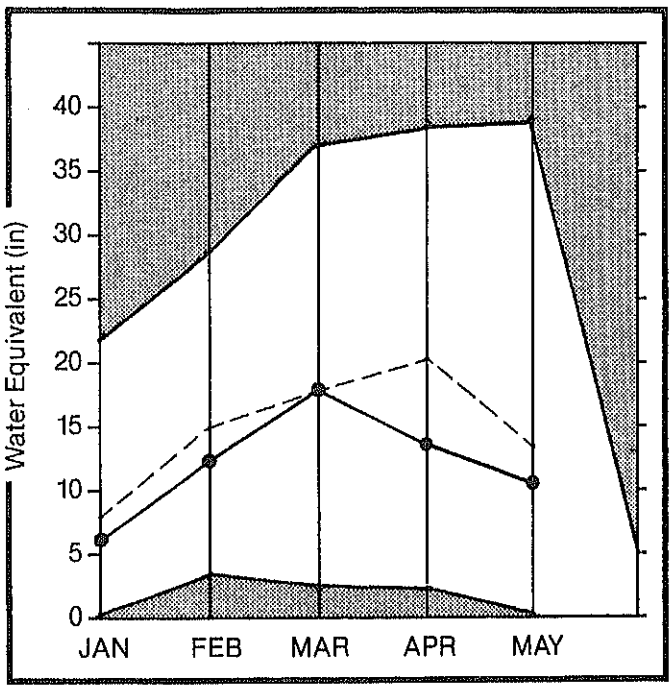
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Yakima River	11	65	63
Ahtanum Creek	1	143	62

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

WALLA WALLA

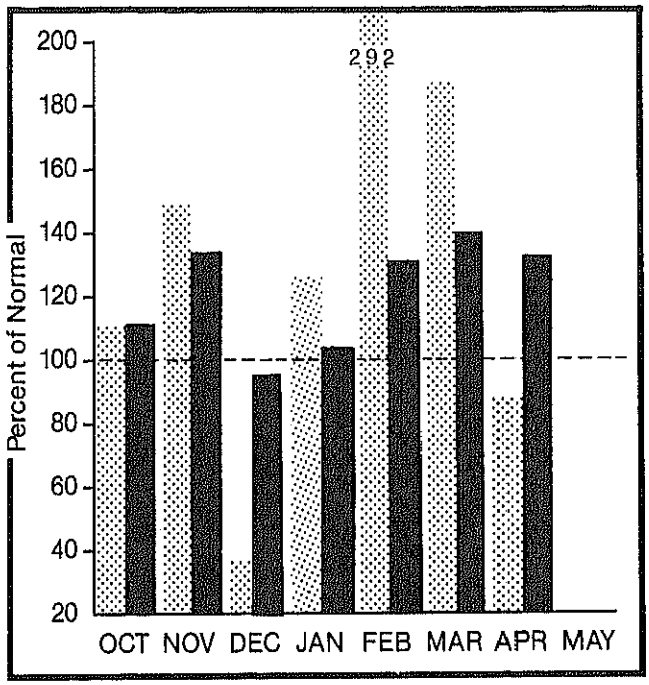
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WALLA WALLA RIVER BASIN

WATER SUPPLY OUTLOOK:

Streamflows dropped below normal for April at 85%. Normal temperatures and below average precipitation of 88% caused the lower flows. The snowpack has melted at the lower elevations. The water content at the Touchet SNOTEL site is 68% of normal May 1 readings. The total precipitation for the water year to date is 99% of average. Forecasted streamflow for the Walla Walla River is 70%.

For more information contact your local Soil Conservation Service office.

WALLA WALLA RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
MILL CREEK NEAR WALLA WALLA	MAY-SEP	7.7	5.7	74	117	39				
	MAY-JUN	7.3	5.3	72	110	41				
	MAY-JUL	7.5	5.4	72	107	40				
COLUMBIA R. at The Dalles x	MAY-SEP	88290.0	77800.0	88	101	75				
	MAY-JUL	73760.0	62800.0	85	98	72				
	MAY-JUN	57360.0	48000.0	85	98	72				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Mill Creek	0	0	0

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

COWLITZ - LEWIS RIVER BASINS

STREAMFLOW FORECASTS

RECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
S RIVER at Ariel x	MAY-SEP	900.0	791.0	87	112	64				
	MAY-JUL	737.0	648.0	87	112	64				
	MAY-JUN	612.0	538.0	87	112	64				
ITZ R. bl Mayfield Dam x	MAY-SEP	1617.0	1290.0	79	129	31				
	MAY-JUL	1357.0	1090.0	80	129	31				
	MAY-JUN	1081.0	865.0	80	129	31				
ITZ R. at Castle Rock x	MAY-SEP	2058.0	1650.0	80	129	31				
	MAY-JUL	1708.0	1370.0	80	129	31				
	MAY-JUN	1365.0	1090.0	79	129	31				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.

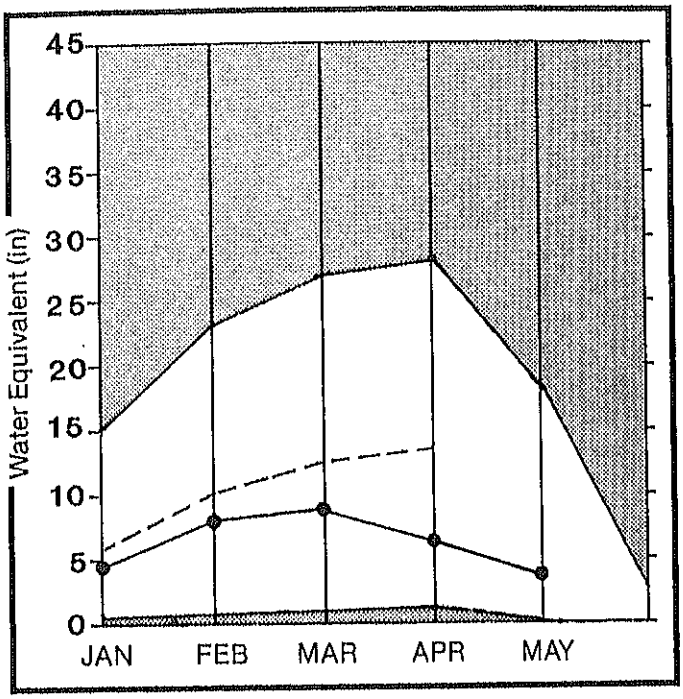
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Cowlitz River	1	78	67
Lewis River	3	79	68

Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

WHITE - GREEN

Mountain snowpack* (inches)



*Based on selected stations

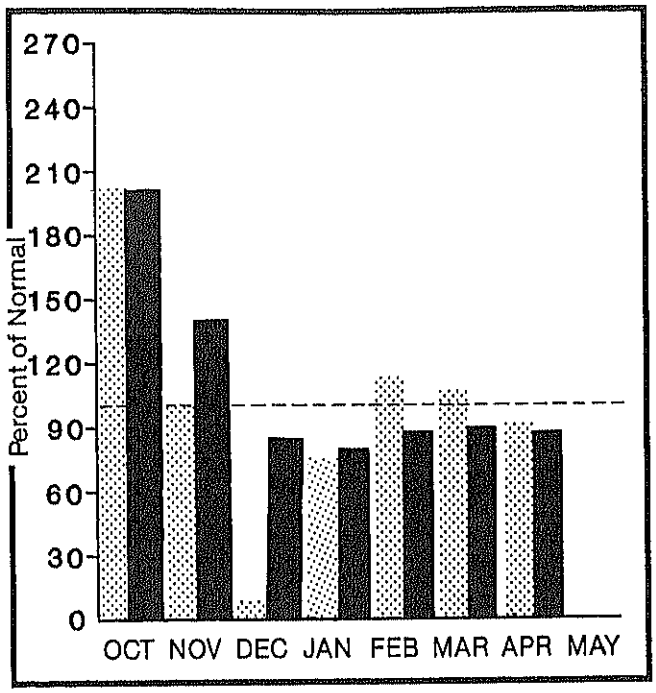
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WHITE - GREEN RIVER BASINS

WATER SUPPLY OUTLOOK:

Snowpack showed some minor improvement with 70% of May 1 normal on the White and 64% on the Green. Streamflow remained low with near normal temperatures and 93% of average April precipitation. The water year to date precipitation is at 89% of average. Streamflows are forecast to be 64% on the Green River and 70% on the Cedar River for the summer.

For more information contact your local Soil Conservation Service office.

WHITE – GREEN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	MEAS. MAX. (% AVE.)	MEAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
GREEN RIVER bl Howard Hanson Dam *	MAY-SEP	316.0	205.0	64	82	48				
	MAY-JUL	284.0	185.0	65	82	48				
	MAY-JUN	256.0	175.0	68	68	68				
CEDAR RIVER nr Cedar Falls	MAY-SEP	74.2	52.0	70	88	53				
	MAY-JUL	65.5	46.5	70	89	53				
	MAY-JUN	54.1	38.0	70	87	54				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

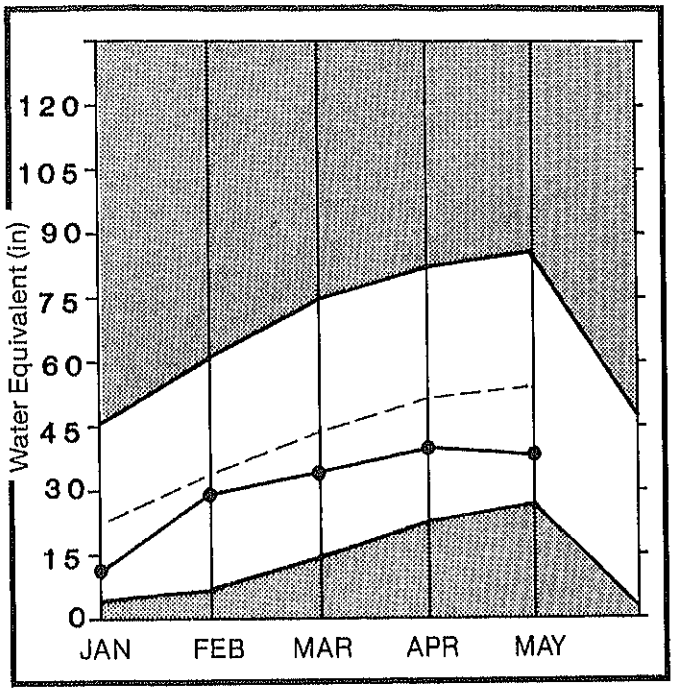
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
White River	1	95	70
Green River	6	36	64

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

NORTH PUGET SOUND

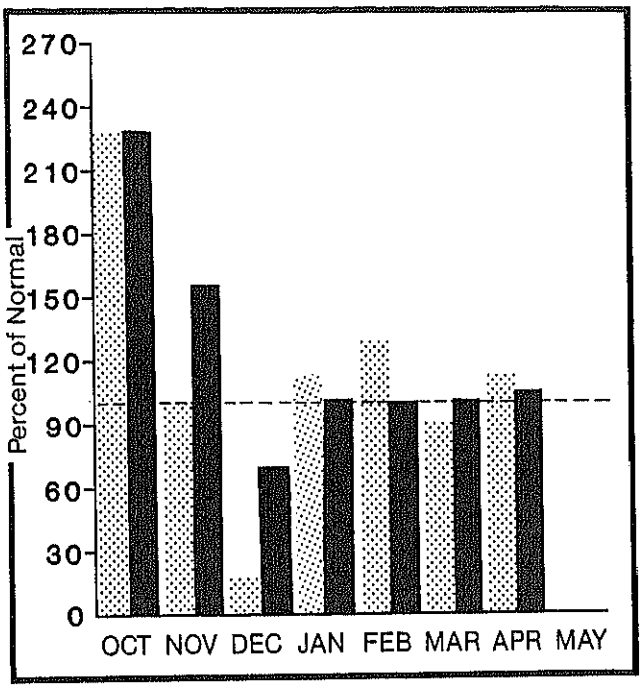
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

NORTH PUGET SOUND RIVER BASINS

WATER SUPPLY OUTLOOK:

Precipitation averaged 119% of normal for April bringing the water year to 104% of normal as of May 1. Streamflow in the Skagit River was 87% of average for April. Snowcover in the Basin was 70% of the May 1 average. Forecasted streamflows are for 75% of normal for the summer months. Reservor storage in Ross Lake is 65% of capacity and 141% of the May 1 average.

For more information contact your local Soil Conservation Service office.

NORTH PUGET SOUND RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SKAGIT RIVER at Newhalem x	MAY-AUG	2532.0	1900.0	75	90	60				
	MAY-SEP	2356.0	1767.0	75	90	60				
	MAY-JUL	1972.0	1479.0	75	90	60				
	MAY-JUN	1485.0	1157.0	77	93	63				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.
ROSS	1404.1	911.8	607.3	644.4
DIABLO RESERVOIR	90.6	86.1	86.0	---
GORGE RESERVOIR	9.8	7.8	7.8	---

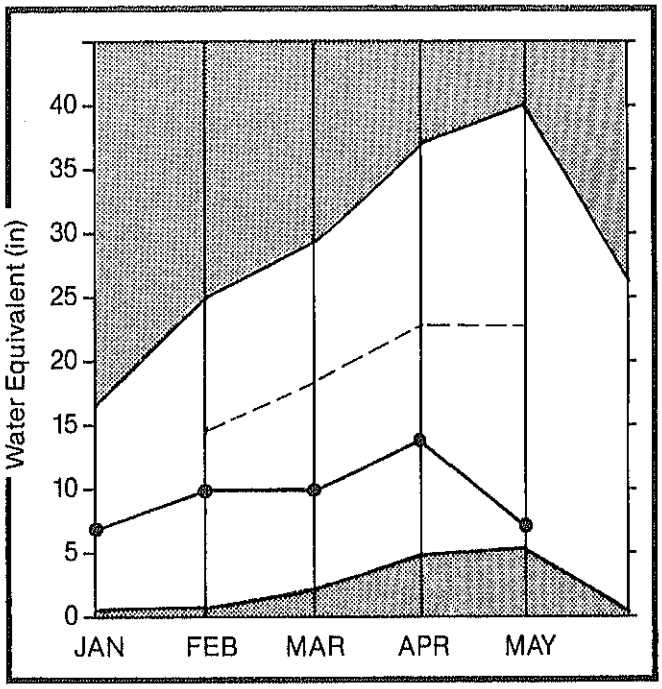
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Skagit River	13	89	69
Baker River	9	60	64
Cedar River	0	0	0
Snoqualmie River	1	52	72
Skykomish River	2	68	50

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

OLYMPIC

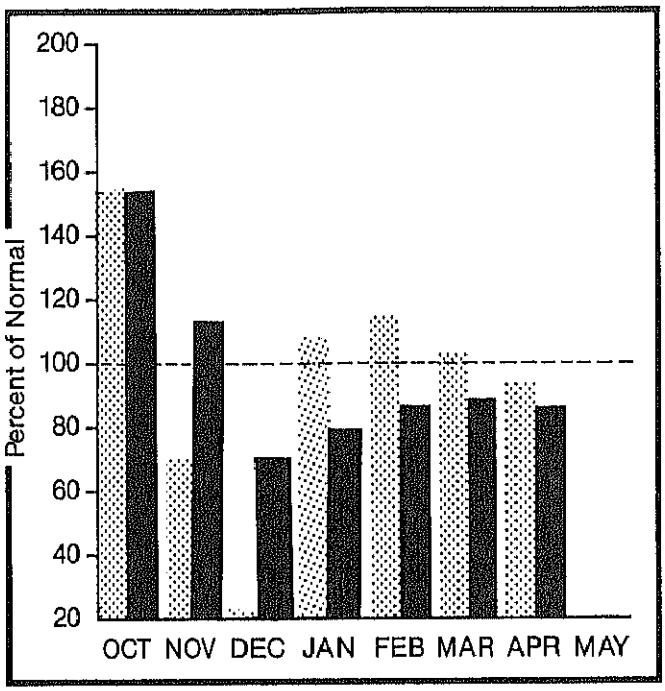
Mountain snowpack* (inches)



*Based on selected stations

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

OLYMPIC PENINSULA RIVER BASINS

WATER SUPPLY OUTLOOK:

Much below averge streamflows are forecast for the Olympic Basin for the coming summer. Forecasts for Duwamish, Elwah and for Morse Creek are 70%. Precipitation for April was 87% of average with the water year totals to May 1 at 88%. Snowcover is very low with the basin average at 27% for May 1.

For more information contact your local Soil Conservation Service office.

OLYMPIC PENINSULA RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DUNGENESS RIVER nr Sequim	MAY-SEP	160.0	112.0	70	87	53				
	MAY-JUL	130.0	91.0	70	87	53				
	MAY-JUN	97.0	68.0	70	87	54				
ELWHA RIVER nr Port Angeles	MAY-SEP	553.0	387.0	69	87	53				
	MAY-JUL	454.0	320.0	70	87	54				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	xx USEABLE STORAGE xx THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Dungeness River	1	50	36
Morse Creek	1	69	60
Elwha River	1	29	19

xCorrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

IMPORTANT NOTICE

WATER SUPPLY OUTLOOK FOR WASHINGTON

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☐ Signed: _____

Suggestions, comments or remarks: _____

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Print or type your name and address on back of this sheet, if it is not there already

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UNITED STATES
DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

PLACE
STAMP
HERE

SNOW SURVEY SUPERVISOR
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201

(STAPLE OR TAPE HERE)

Snow Survey data can be obtained by calling one of the following local SCS offices:

PULLMAN PMC

Office (509) 335-7376
Farm (509) 335-9689

OLYMPIA, Area I

Area Office	FTS	434-9454 or 9455
Chehalis		(206) 748-0083
Kelso		(206) 425-1880
Lake Stevens	FTS	392-9259
Lynden		(206) 354-5658
Montesano		(206) 249-5900
Mt. Vernon		(206) 424-5153
Olympia FO	FTS	434-9448
Port Angeles	FTS	396-4277
Port Orchard		(206) 876-5529
Puyallup		(206) 845-5533
Raymond		(206) 942-5945
Renton	FTS	399-3325 or 3326
Vancouver	FTS	422-7631

EPHRATA, AREA II

Area Office	FTS	446-4374 or 4375
Davenport		(509) 725-4181 or 725-1345
Ephrata FO	FTS	446-4385
Moses Lake		(509) 765-3261
Okanogan		(509) 422-2750
Othello		(509) 488-2802
Ritzville		(509) 659-0254
Waterville		(509) 745-8362
Wenatchee	FTS	390-0242 or 0260

YAKIMA, AREA III

Area Office	FTS	446-5865 or 5866
Ellensburg		(509) 925-5375
Goldendale		(509) 773-5823
Pasco		(509) 545-8546 or 8547
Prosser		(509) 786-1923
Sunnyside		(509) 837-7911
Toppenish		(509) 865-4012
Walla Walla	FTS	434-6340
White Salmon		(509) 493-1936
Yakima FO	FTS	446-5909

SPOKANE, AREA IV

Area Office	FTS	439-3726
Cheney		(509) 458-6200, Ext 2309
Clarkston		(509) 758-8012
Colfax		(509) 397-4636
Colville		(509) 684-5067
Dayton		(509) 382-2351
Fairfield		(509) 283-2231
Newport		(509) 447-4217
Pomeroy		(509) 843-1998
Republic		(509) 775-3473
Spokane FO	FTS	439-2120

SOIL SURVEY OFFICES

Bellingham		(206) 676-3520
Inchelium		(509) 722-4395
Nespelem	FTS	439-9431
Wapato		(509) 877-4004

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
  Corps of Engineers
U.S. Department of Agriculture
  Forest Service
U.S. Department of Commerce
  NOAA, National Weather Service
U.S. Department of the Interior
  Bonneville Power Administration
  Bureau of Reclamation
  Geological Survey
  National Park Service
  Bureau of Indian Affairs

Local:

City of Tacoma
City of Seattle
Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company
Snohomish County P.U.D.

Private:

Okanogan Irrigation District
Wenatchee Heights Irrigation District
Newman Lake Homeowners Association

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.